

and sizes thereof. Moreover, the semiconductor image sensing element and the semiconductor image sensing device according to the present invention also achieve the effect of allowing the lower-cost fabrication thereof since the fabrication processes therefor are simple and easy.

What is claimed is:

1. A semiconductor image sensing element comprising:
  - a semiconductor element having an image sensing area, a plurality of electrode portions, and a plurality of micro-lenses provided on the image sensing area; and
  - an optical member having a configuration covering at least the image sensing area and bonded over the micro-lenses via a transparent bonding member, wherein
    - a light shielding portion is provided on a side surface region of the optical member.
2. The semiconductor image sensing element of claim 1, wherein the light shielding portion is a light shielding film or a light shielding pattern.
3. A semiconductor image sensing element comprising:
  - a semiconductor element having an image sensing area, a plurality of electrode portions, and a plurality of micro-lenses provided on the image sensing area;
  - an optical member having a configuration covering at least the image sensing area and bonded over the micro-lenses via a transparent bonding member; and
  - a light shielding member formed on an exposed region of the transparent bonding member and on a side surface region of the optical member to have openings for exposing the electrode portions.
4. The semiconductor image sensing element of claim 3, wherein the light shielding member is made of a resin which cuts off at least a visible light beam.
5. The semiconductor image sensing element of claim 3, wherein the side surface region of the optical member is configured to tilt with respect to a light receiving surface.
6. The semiconductor image sensing element of claim 3, wherein the side surface region of the optical member is formed into a rough surface.
7. The semiconductor image sensing element of claim 3, wherein a material of the optical member is made of Pyrex glass, Terex glass, quartz, an acrylic resin, or an epoxy resin.
8. The semiconductor image sensing element of claim 3, wherein bumps are formed on respective surfaces of the electrode portions of the semiconductor element.
9. A method for fabricating a semiconductor image sensing element, the method comprising the steps of:
  - preparing a semiconductor wafer on which semiconductor elements each having an image sensing area, a plurality of electrode portions, and a plurality of micro-lenses provided on the image sensing area are arranged as an array;
  - forming at least one of a light shielding film and a light shielding pattern on a side surface of each of optical members having a configuration covering at least the image sensing area;
  - forming a transparent bonding member on the image sensing area of each of the individual semiconductor elements on the semiconductor wafer;

aligning the optical members with respect to the individual image sensing areas and bonding the optical members to the individual semiconductor elements by using the transparent bonding members; and

cutting the semiconductor wafer into the separate individual semiconductor elements.

10. A method for fabricating a semiconductor image sensing element, the method comprising the steps of:

preparing a semiconductor wafer on which semiconductor elements each having an image sensing area, a plurality of electrode portions, and a plurality of micro-lenses provided on the image sensing area are arranged as an array;

forming optical members each having a configuration covering at least the image sensing area;

forming a transparent bonding member on the image sensing area of each of the individual semiconductor elements on the semiconductor wafer;

aligning the optical members with respect to the individual image sensing areas and bonding the optical members to the individual semiconductor elements by using the transparent bonding members;

forming a light shielding member on an exposed region of the transparent bonding member over each of the semiconductor elements and on a side surface region of each of the optical members to form openings for exposing the electrode portions; and

cutting the semiconductor wafer into the separate individual semiconductor elements.

11. The method of claim 9, further comprising the step of:

forming bumps on the electrode portions of each of the semiconductor elements.

12. The method of claim 10, further comprising the step of:

forming bumps on the electrode portions of each of the semiconductor elements.

13. A semiconductor image sensing device comprising:

a semiconductor image sensing element;

a package having a mounting portion to which the semiconductor image sensing element is fixed and metal thin wire connection portions;

a fastening member for fastening the semiconductor image sensing element to the mounting portion of the package;

metal thin wires for providing connection between the electrode portions of the semiconductor image sensing element and the metal thin wire connection portions; and

a burying resin for burying the metal thin wires therein and protecting the metal thin wires, wherein

the semiconductor image sensing element is made of the semiconductor image sensing element of claim 3.

14. The semiconductor image sensing device of claim 13, wherein an inner wall of the package is formed into a rough surface configuration.